

AMENDMENTS TO THE CLAIMS

The following listing of Claims will replace all prior versions and listings of Claims in the application.

1. (Currently Amended) A connector for use in a plasma arc apparatus comprising:

a housing defining a hollow internal channel, the hollow internal channel comprising a shoulder disposed between a first portion and a second portion of the hollow internal channel;

at least one locking finger disposed within the hollow internal channel and disposed distally from the shoulder, wherein the shoulder and the locking finger are integral with the housing; and

a pin comprising:

a first collar with a shoulder disposed thereon; and

a second collar disposed proximally from the first collar,

wherein the locking finger engages the pin shoulder to prevent movement of the pin in a proximal direction and the housing shoulder engages the second collar of the pin to prevent movement of the pin in a distal direction without a member disposed between the locking finger and the housing, and the second collar of the pin blocks access to the locking finger through the first portion of the hollow internal channel.

2. (Currently Amended) The connector of Claim 1, wherein the pin further comprises a tapered portion such that the pin shoulder is disposed between the first collar and the tapered portion.

3. (Cancelled)

4. (Currently Amended) The connector of Claim ~~[[3]]~~ 1, wherein the housing ~~and the locking finger comprise~~ comprises a fiber-reinforced nylon material.

5. (Original) The connector of Claim 1 further comprising eight locking fingers evenly spaced around the hollow internal channel.

6. (Cancelled)

7. (Currently Amended) The connector of Claim 1, wherein the pin is recessed within ~~[[a]]~~ the second portion of the hollow internal channel.

8. (Original) The connector of Claim 1, wherein the pin is a negative lead gas carrying pin of the plasma arc cutting apparatus.

9. (Currently Amended) The connector of Claim ~~[[7]]~~ 1, wherein the pin comprises a brass material.

10. (Currently Amended) A connector for use in a plasma arc apparatus comprising:

a plug housing defining a hollow internal channel with a first portion and a second portion;

a plurality of locking fingers disposed within the hollow internal channel between the first portion and the second portion, the locking fingers being integral with the housing; and

a negative lead gas carrying pin comprising a first collar with a shoulder disposed thereon, and a second collar disposed proximally from the first collar,

wherein the locking fingers engage the shoulder to prevent movement of the negative lead gas carrying pin in a proximal direction, ~~[[and]]~~ the housing engages the second collar to prevent movement of the negative lead gas carrying pin in a distal direction, and the second collar of the negative lead gas carrying pin blocks access to the locking fingers through the first portion of the hollow internal channel.

11. (Cancelled)

12. (Currently Amended) The connector of Claim ~~[[11]]~~ 10, wherein the plug housing ~~and the locking fingers comprise~~ comprises a fiber-reinforced nylon material.

13. (Original) The connector of Claim 10, wherein the plurality of locking fingers comprise eight locking fingers evenly spaced around the hollow internal channel.

14. (Cancelled)

15. (Currently Amended) The connector of Claim 10, wherein the pin is recessed within ~~[[a]]~~ the second portion of the hollow internal channel.

16. (Original) The connector of Claim 10, wherein the negative gas carrying pin comprises a brass material.

17. (Currently Amended) A connector comprising:

a housing defining a hollow internal channel, the hollow internal channel comprising a first portion, a second portion, and a shoulder disposed between the first portion and the second portion;

at least one locking finger disposed within the hollow internal channel and disposed distally from the shoulder, the locking finger and the shoulder being integral with the housing; and

a pin defining a first collar with a shoulder disposed thereon[; and]], and a second collar disposed proximally from the first collar,

wherein the second collar slidably blocks access to the locking finger through the first portion of the hollow internal channel, the pin is recessed within the second portion of the hollow internal channel, the locking finger engages the pin shoulder to prevent movement of the pin in a proximal direction, and the housing shoulder engages the second collar to prevent movement of the pin in a distal direction.

18. (Cancelled)

19. (Currently Amended) The connector of Claim [[18]] 17, wherein the housing ~~and the locking finger comprise~~ comprises a fiber-reinforced nylon material.

20. (Original) The connector of Claim 17 further comprising eight locking fingers evenly spaced around the hollow internal channel.

21. (Currently Amended) A connector for use between a power supply and a torch lead in a plasma arc apparatus, the connector comprising:

a plug housing defining a hollow internal channel;

a plurality of locking fingers integrally formed with the plug housing and disposed within the hollow internal channel; and

a negative lead gas carrying pin defining a first collar with a shoulder disposed thereon, and a second collar disposed ~~distally~~ proximally from the first collar;

wherein the locking fingers engage the shoulder to prevent movement of the negative lead gas carrying pin in a proximal direction, ~~and~~ the plug housing engages the second collar to prevent movement of the negative lead gas carrying pin in a distal direction, and the second collar blocks access to the locking fingers through a first portion of the hollow internal channel.

22. (Original) The connector of Claim 21, wherein the plurality of locking fingers comprise eight locking fingers evenly spaced around the hollow internal channel.

23. (Cancelled)

24. (Original) The connector of Claim 21, wherein the negative lead gas carrying pin is recessed within a second portion of the hollow internal channel.

25. (Currently Amended) The connector of Claim 21, wherein the plug housing ~~and the locking fingers comprise~~ comprises a fiber-reinforced nylon material.

26. (Original) The connector of Claim 21, wherein the negative lead gas carrying pin comprises a brass material.

27. (Currently Amended) A housing for use in connecting a pin in a plasma arc apparatus comprising:

a hollow internal channel comprising a shoulder; and

at least one locking finger disposed within the hollow internal channel and disposed distally from the shoulder, the shoulder and the locking finger being integral with the housing,

wherein the locking finger ~~engages the pin to prevent~~ prevents movement of the pin in a proximal direction, and the shoulder ~~engages the pin to prevent~~ prevents movement of the pin in a distal direction.

28. (Original) The housing of Claim 27 further comprising eight locking fingers evenly spaced around the hollow internal channel.

29-30. (Cancelled)

31. (Currently Amended) The connector of Claim 27, wherein the housing ~~and the locking finger comprise~~ comprises a fiber-reinforced nylon material.

32. (Currently Amended) A pin for use in a plasma arc apparatus comprising:

a first collar comprising a shoulder; and

a second collar disposed proximally from the first collar~~[[,]]~~ ; and

a tapered portion extending between the first collar and the second collar,

wherein the shoulder ~~is engaged by a locking finger disposed within a housing to prevent~~ prevents movement of the pin in a proximal direction, and the second collar is engaged by a shoulder disposed within the housing to prevent prevents movement of the pin in a distal direction, and the tapered portion is adapted to secure the pin within the plasma arc apparatus.

33. (Cancelled)

34. (Original) The pin of Claim 32, wherein the pin comprises a brass material.

35. (Currently Amended) In a connector for making a connection in a plasma arc apparatus to provide fluid and electric power, the connector having a housing mounting a pin for conducting fluid and electric power, the improvement comprising:

a tamper resistant connection between the housing and the pin comprising:

a first collar;

a second collar disposed proximally from the first collar; and

a hollow internal channel within the housing to receive the pin, the hollow internal channel comprising a plurality of locking fingers and a shoulder disposed proximally from the locking fingers, the locking fingers and shoulder being integral with the housing, wherein the locking fingers engage the first collar to secure the pin in a proximal direction and the housing shoulder engages the second collar to secure the pin in a distal direction.

36. (Original) The connector of Claim 35, wherein at least a portion of the pin proximal to the fingers is sized to closely conform to the hollow internal channel, to restrict access to the locking fingers.

37. (Original) The connector of Claim 35, wherein the locking fingers slope inwardly and distally, and wherein the shoulder faces proximally when disposed in the hollow internal channel to engage distal ends of the locking fingers and retain the pin against proximal movement.

38. (Original) The connector of Claim 35, wherein the hollow internal channel and the pin extend distally beyond the engagement between the locking fingers and the pin, to define a relatively long, restricted space between the pin and the hollow internal channel that restricts access to the fingers.

39. (Currently Amended) A connector for use in a plasma arc apparatus comprising:

a housing defining a hollow internal channel, the hollow internal channel comprising a shoulder;

at least one locking finger disposed within the hollow internal channel and spaced distally from the shoulder, the locking finger and shoulder being integral with the housing; and

a pin comprising:

a first collar; and

a second collar disposed proximally from the first collar,

wherein the locking finger engages the first collar to secure the pin in a proximal direction and the shoulder engages the second collar to secure the pin in a distal direction.

40. (Previously Presented) A connector for use in a plasma arc apparatus comprising:

a housing defining a hollow internal channel;

at least one locking finger disposed within the hollow internal channel; and

a pin disposed within the housing and comprising:

a first collar with a shoulder disposed thereon; and

a second collar disposed proximally from the first collar,

wherein the locking finger engages the shoulder and the second collar engages the housing such that the pin cannot be removed without destruction of the connector.

41. (Previously Presented) A connector for use in a plasma arc apparatus comprising:

a housing defining a hollow internal channel;

at least one locking finger disposed within the hollow internal channel, the locking finger sloping inwardly and distally; and

a pin comprising:

a first collar; and

a second collar disposed proximally from the first collar,

wherein the locking finger engages the first collar to secure the pin in a proximal direction and the second collar engages the hollow internal channel to secure the pin in a distal direction.

42. (New) A connector for use in a plasma arc apparatus comprising:

a housing defining a hollow internal channel, the hollow internal channel comprising a shoulder;

B1 at least one locking finger disposed within the hollow internal channel, the locking finger sloping inwardly and distally and the housing shoulder being disposed at a proximal base portion of the locking finger; and

a pin comprising:

a first collar with a shoulder disposed thereon; and

a second collar disposed proximally from the first collar,

wherein the locking finger engages the pin shoulder to prevent movement of the pin in a proximal direction and the housing shoulder engages the second collar of the pin to prevent movement of the pin in a distal direction.
